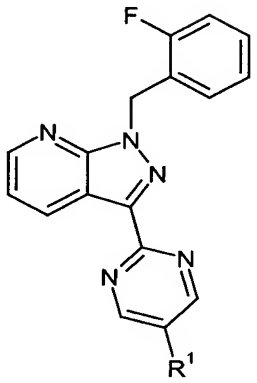
Claims

1. A compound of the formula

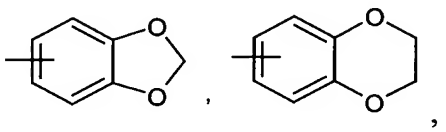


(I),

in which

R^1 is C_6-C_{10}-aryl or 5- to 10-membered heteroaryl which are optionally substituted by radicals selected from the group of halogen, cyano, C_1-C_6-alkoxy, C_1-C_6-alkoxycarbonyl, trifluoromethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, C_1-C_4-alkyl and C_3-C_8-cycloalkyl, where C_1-C_4-alkyl is optionally substituted by hydroxy,

or a group of the formula



or

4- to 12-membered heterocyclyl which is bonded via a nitrogen atom and which is optionally substituted by radicals selected from the group of $-NHR^2$, halogen, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkoxy, C_1-C_6-alkyl and oxo, where C_1-C_6-alkyl is optionally substituted by hydroxy, and

R^2 is C_1-C_4-alkyl,

or

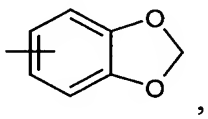
C_4-C_8-cycloalkyl which is substituted in the position adjacent to the point of attachment by oxo, and which is optionally substituted by C_1-C_4-alkyl,

and the salts, solvates and/or solvates of the salts thereof.

2. The compound as claimed in claim 1, where

R^1 is phenyl or 5- to 6-membered heteroaryl, which are optionally substituted by radicals selected from the group of fluorine, chlorine, cyano, C_1-C_3-alkoxycarbonyl, C_1-C_3-alkoxy, trifluoromethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, C_1-C_3-alkyl and C_3-C_5-cycloalkyl, where C_1-C_3-alkyl is optionally substituted by hydroxy,

or a group of the formula



,

or

4- to 12-membered heterocyclyl which is bonded via a nitrogen atom and which is optionally substituted by radicals selected from the group of $-NHR^2$, fluorine, chlorine, C_1-C_3-alkyl, C_1-C_3-alkoxycarbonyl, C_1-C_3-alkoxy and oxo, where C_1-C_3-alkyl is optionally substituted by hydroxy,

and

R^2 is C_1-C_3-alkyl,

or

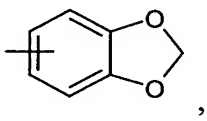
cyclohexyl which is substituted in the position adjacent to the point of attachment by oxo, and which is optionally substituted by C_1-C_2-alkyl,

and the salts, solvates and/or solvates of the salts thereof.

3. The compound as claimed in claim 1 or 2, where

R^1 is phenyl or pyridyl, pyrazolyl, isoxazolyl, which are optionally substituted by radicals selected from the group of fluorine, chlorine, cyano, methoxy, methoxycarbonyl, ethoxycarbonyl, trifluoromethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, methyl, cyclopropyl or hydroxymethyl,

or a group of the formula



,

or

4- to 12-membered heterocyclyl which is bonded via a nitrogen atom and which is optionally substituted by radicals selected from the group of $-NHR^2$, fluorine, chlorine, C_1-C_3-alkyl, methoxy, ethoxy, hydroxymethyl and oxo, and

R^2 is methyl,

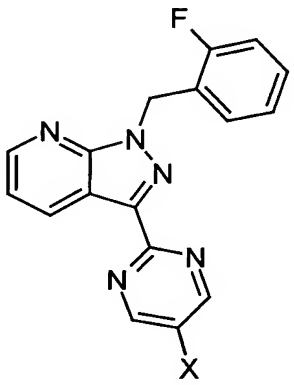
or

cyclohexyl which is substituted in the position adjacent to the point of attachment by oxo, and which is optionally substituted by methyl,

and the salts, solvates and/or solvates of the salts thereof.

4. A process for preparing compounds of the formula (IV), (VI) and (VII), characterized in that either

[A] compounds of the formula



(II),

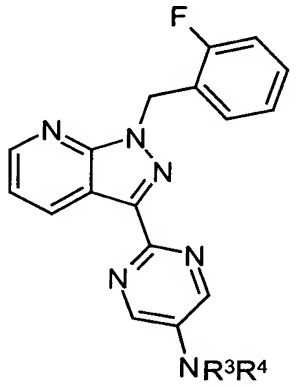
in which X is chlorine, bromine, iodine, preferably bromine,

are reacted with a compound of the formula

R^3-NH-R^4 (III),

in which

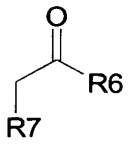
R^3, R^4 together with the nitrogen atom to which they are bonded are a 4- to 12-membered heterocyclyl which is optionally substituted by radicals selected from the group of $-NHR^2$, halogen, C_1-C_6-alkoxycarbonyl, C_1-C_6-alkoxy, C_1-C_6-alkyl and oxo, where C_1-C_6-alkyl is optionally substituted by $-OR^5$, and R^2 has the meaning indicated above, R^5 is a hydroxy protective group in an inert solvent in the presence of a base and of a transition metal catalyst to give compounds of the formula



(IV),

or

[B] compounds of the formula (II) are reacted with a compound of the formula

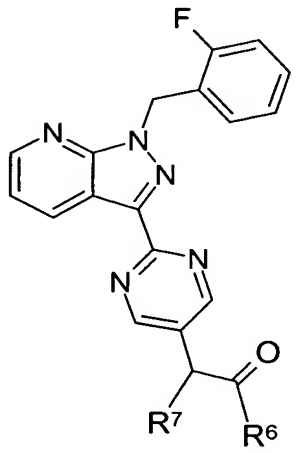


(V),

in which

R^6 is cycloalkyl, R^7 is hydrogen or R^6 and R^7 together with the CH_2CO group to which they are bonded are cycloalkyl which may be substituted by C_1-C_6-alkyl radicals, in an inert solvent in the presence

of a base and of a transition metal catalyst to give compounds of the formula



(VI)

or

[C] compounds of the formula (II) are reacted with a compound of the formula

$$A\text{-}R^8 \quad (VII),$$

in which

A is $-B(OR^9)_2$ or $-Sn(C_1\text{-}C_6\text{-alkyl})_3$, where

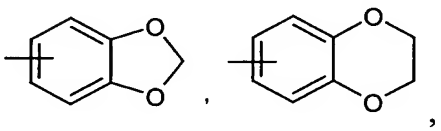
R^9 is hydrogen, C_1-C_6-alkyl or two radicals together form a $-CH_2CH_2-$ or $-(CH_3)_2C\text{-}C(CH_3)_2-$ bridge,

and

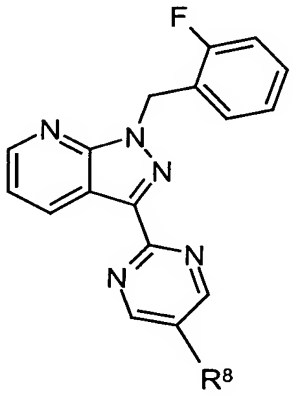
R^8 is C_6-C_{10}-aryl or 5- to 10-membered heteroaryl which are optionally substituted by radicals selected from the group of halogen, cyano,

C_1-C_6-alkoxy, C_1-C_6-alkoxycarbonyl, trifluoromethyl, 2,2,2-trifluoroethyl, trifluoromethoxy, C_1-C_4-alkyl and C_3-C_8-cycloalkyl, where C_1-C_4-alkyl is optionally substituted by hydroxy,

or a group of the formula



in an inert solvent in the presence of a base and of a transition metal catalyst to give compounds of the formula



(VIII),

and the resulting compounds of the formula (IV), (VI) and (VIII) are optionally reacted with the appropriate (i) solvents and/or (ii) bases or acids to give the solvates, salts or solvates of the salts thereof.

5. A compound of the invention as claimed in any of claims 1 to 3 for the treatment and/or prophylaxis of diseases.

6. A medicament comprising at least one of the compounds as claimed in any of claims 1 to 3 mixed together with at least one pharmaceutically acceptable, essentially nontoxic carrier or excipient.

7. The use of compounds as claimed in any of claims 1 to 3 for producing a medicament for the treatment and/or prophylaxis of central nervous system diseases.

8. The use of compounds as claimed in any of claims 1 to 3 for producing a medicament for the treatment and/or prophylaxis of disorders of perception, concentration, learning and/or memory.

9. The medicament as claimed in claim 6 for the treatment and/or prophylaxis of central nervous system diseases.

10. The medicament as claimed in claim 6 for the treatment and/or prophylaxis of disorders of perception, concentration, learning and/or memory.

11. A method for controlling disorders of perception, concentration, learning and/or memory in humans or animals by administering an effective amount of the compounds from claims 1 to 3.